

RF EXPOSURE REPORT

FOR

Applicant	:	BEIJING MADV TECHNOLOGY CO., LTD.
Address	:	NO.80, FLOOR 4, BUILDING17, YARD 30, SHIXINGDAJIE SHIJINGSHAN DISTRICT, BEIJING, CHINA
Equipment under Test	:	MADV Smart Video Doorbell 2M
Model No.	:	FJ07MLTZ (Transmitter) FJ05MLNJ (Receiver)
Trade Mark	:	N/A
FCC ID	:	2AJ2LE3JGL
Manufacturer	:	BEIJING MADV TECHNOLOGY CO., LTD.
Address	:	NO.80, FLOOR 4, BUILDING17, YARD 30, SHIXINGDAJIE SHIJINGSHAN DISTRICT, BEIJING, CHINA

Issued By: Dongguan Dongdian Testing Service Co., Ltd.

Add.: No. 17, Zongbu Road 2, Songshan Lake Sci&Tech, Industry Park,
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REPORT

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Test Report Declare

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Standard Used: KDB447498 D01 General RF Exposure Guidance v06

We Declare:

The equipment described above is assessed by Dongguan Dongdian Testing Service Co., Ltd and in the configuration assessed the equipment complied with the standards specified above. The assessed results are contained in this report and Dongguan Dongdian Testing Service Co., Ltd is assumed of full responsibility for the accuracy and completeness of these assess.

After evaluation, our opinion is that the equipment In Accordance with above standard.

Report No:	DDT-R22102105-2E03		
Date of Receipt:	Oct. 26, 2022	Date of Test:	Oct. 26, 2022 ~ Nov. 09, 2022

Prepared By:

Sanvin Zheng

Sanvin Zheng/Engineer

Approved By:



Damon Hu/EMC Manager

Note: This report applies to above tested sample only. This report shall not be reproduced in parts without written approval of Dongguan Dongdian Testing Service Co., Ltd.

Revision History

Rev.	Revisions	Issue Date	Revised By
---	Initial issue	Nov. 09, 2022	

1. General Information

1.1. Description of equipment

EUT* Name	:	MADV Smart Video Doorbell 2M
Model Number	:	FJ07MLTZ (Transmitter) FJ05MLNJ (Receiver)
EUT function description	:	Please reference user manual of this device
Power Supply	:	FJ07MLTZ DC 3.7 V Rechargeable Lithium-ion battery DC 5V from external AC Adapter
	:	FJ05MLNJ DC 5V from external AC Adapter
Radio Technology	:	IEEE 802.11b/g/n
Operation frequency	:	IEEE 802.11b: 2412MHz - 2462MHz IEEE 802.11g: 2412MHz - 2462MHz IEEE 802.11n HT20: 2412MHz - 2462MHz IEEE 802.11n HT40: 2422MHz - 2452MHz
Modulation	:	IEEE 802.11b: DSSS (CCK, DQPSK, DBPSK) IEEE 802.11g: OFDM (64QAM, 16QAM, QPSK, BPSK) IEEE 802.11n: OFDM (64QAM, 16QAM, QPSK, BPSK)
Transmitter rate	:	IEEE 802.11b: 1, 2, 5.5, 11 Mbps IEEE 802.11g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps IEEE 802.11n HT20: up to 72.2 Mbps IEEE 802.11n HT40: up to 150 Mbps
Antenna Type	:	FPC Antenna, Maximum peak gain: 1.57 dBi
Sample Number	:	S22102105-01 for conductive S22102105-02 for radiation

1.2. Assess laboratory

Dongguan Dongdian Testing Service Co., Ltd.

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Tel.: +86-0769-38826678, <http://www.dgddt.com>, Email: ddt@dgddt.com.

CNAS Accreditation No. L6451; A2LA Accreditation Number: 3870.01

FCC Designation Number: CN1182, Test Firm Registration Number: 540522

Innovation, Science and Economic Development Canada Site Registration Number: 10288A

Conformity Assessment Body identifier: CN0048

VCCI facility registration number: C-20087, T-20088, R-20123, R-20155, G-20118

2. RF Exposure Evaluation

2.1. Requirement

Systems operating under the provisions of FCC 47 CFR section shall be operated in a manner that ensures that the public is not exposed to radio frequency energy level in excess of the Commission's guidelines.

In accordance with 47 CFR FCC Part 2 Subpart J, section 2.1091 this device has been defined as mobile device whereby a distance of 0.2 m normally can be maintained between the user and the device, and below RF Permissible Exposure limit shall comply with.

Limits for General Population/Uncontrolled Exposure

(B) Limits for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-1.34	614	1.63	(100)*	30
1.34-30	824/f	2.19/f	(180/f)*	30
30-300	27.5	0.073	0.2	30
300-1500			F/1500	30
1500-100,000			1.0	30

Note: f = frequency in MHz ; *Plane-wave equivalent power density

2.2. Calculation method

$$E(\text{V/m}) = \frac{\sqrt{30 \times P \times G}}{d} \quad \text{Power Density: } S(\text{mW/cm}^2) = \frac{E^2}{377}$$

E = Electric field (V/m)

P = Peak RF output power (mW)

G = EUT Antenna numeric gain (numeric)=

d = Separation distance between radiator and human body (m)

The formula can be changed to

We can change the formula to:

$$S = \frac{30 \times P \times G}{377 \times d^2} \quad \text{or, } d = \sqrt{\frac{30 \times P \times G}{377 \times S}}$$

From the peak EUT RF output power, the minimum mobile separation distance, d= 0.2 m, as well as the gain of the used antenna, the RF power density can be obtained.

2.3. Estimation result

Mode	Maximum tune-up power (dBm)	Output power (mW)	Antenna Gain (dBi)	Antenna Gain (linear)	MPE Values (mW/cm ²)	MPE Limit (mW/cm ²)
2.4G WIFI Max power	16.48	44.46	1.57	1.44	0.01274	1

Note: The estimation distance is 20 cm

Conclusion: The measurement results comply with the FCC Limit per 47 CFR 2.1091 for the uncontrolled RF Exposure of mobile device.

END OF REPORT